

# Army Acquisition Reform Newsletter



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Questions? Contact Teresa Wright-Johnson, (703) 681-7575, [wrightt@sarda.army.mil](mailto:wrightt@sarda.army.mil)

## Army Wins David Packard Award

The Portal Shield Biological Warfare Agent Detection System recently received the 1998 David Packard Acquisition Award for Project Management. Portal Shield is DoD's first automated biological detection (BD) system fielded to protect US forces at overseas high value fixed-site facilities such as airfields and ports. The Portal Shield Team applied many of the principles and concepts of acquisition streamlining and reform to rapidly field this capability to the warfighter.

In 1996, the Joint Program Office for Biological Defense (JPO-BD) initiated this program as an Advanced Concept Technology Demonstration (ACTD). The system consists of a variable number of fully automated biological sensors forming a network under the command and control of a centralized command post computer. Biological sensors are modular in design and can detect up to eight threat agents simultaneously in less than 25 minutes. The prototype was ready for action in just under 2 years from concept to deployment! The Mark II prototype was successfully deployed and operated in support of Operation Desert Thunder in 1998. The Mark III transitioned into production 1 year later.

With rapidly evolving BD technology, anticipating change is one of the basic tenets of the Portal Shield modular design. The current Mark III sensor is the 3rd generation of a continuous improvement design philosophy. The Team attacked the servicing of the sensor as if it were a "pit stop" during an auto race.

The result is a plug and play Mark III sensor that can be assembled without tools in 2 minutes and whose capability can be upgraded, as new technology/components become available (Modernize Through Spares.)

To reduce acquisition cycle time and total ownership costs, the Team took maximum advantage of Commercial Off-the-shelf (COTS) items. Approximately 90% of the Mark III sensors are COTS or modified COTS. Built-in red and green test diodes were designed into the front cover of each sensor plug and play module to allow the operator to quickly determine if the module is in proper working order.

The Team lived the "continuous improvement" philosophy. The program successfully passed three field trials in rapid succession from 1996-1998. Its performance grew with each trial. The prototype Mark II system was deployed to Kuwait in February 1998 in support of Operation Desert Thunder. Numerous hardware and software design changes were rapidly incorporated into the Mark III based on this real world operation.

In January 1998, using a tailored Milestone III package, the Portal Shield ACTD transitioned into the production phase, one of only two ACTDS since 1995 to do so.

Point of contact for this article is Mr. Brian David, (703) 681-9602 or DSN 761-9602.